

Electret Condenser Microphone

Customer	
Customer P/O	
BeStar Model Name	BCM9765
Product No.	190500
Issue No.	BS/TEM01.001A
Issue Date	02/05/20

Approval:

- 1.Technical Terms
- 2.Appearance
- 3.Reliability Test



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Electret Condenser Microphone

Model:BCM9765

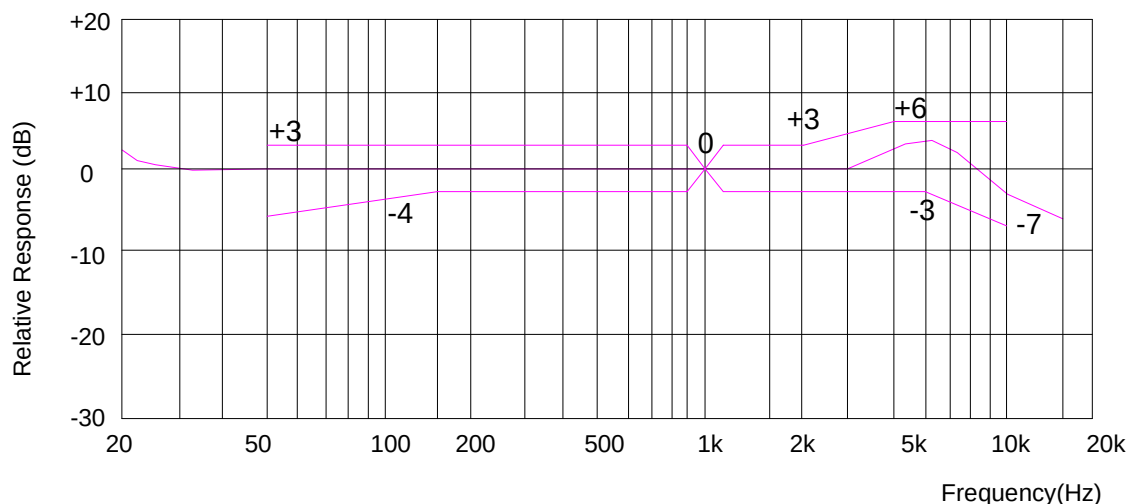
1. Technical Terms

1.1 Electrical Characteristics

Test Condition($V_s=6V$ $R_L=1K\Omega$ $T_a=20^\circ C$ $R.H=55\%$)

Item	Symbol	Condition	Minimum	Standard	Maximum	Unit
Sensitivity	S	$f=1kHz, P_{in}=1\mu bar$	-64	-62.5	-61	dB(0dB=1V/Pa)
Output Impedance	Z_{out}	$f=1kHz$			1k	Kohm
Directivity		Omnidirectional				
Current Consumption	I				400	uA
S/N Ratio	S/N(A)	$f=1kHz, P_{in}=1\mu bar$ (A Curve)	40			dB
Decreasing	ΔS	$f=1kHz, V_s=4.5-1.5V$			-3	dB

1.2 Typical Frequency Response

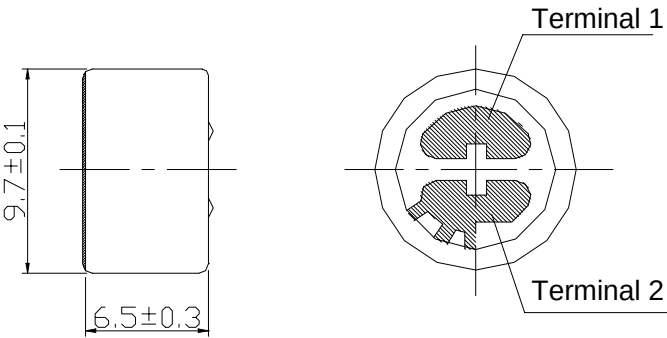


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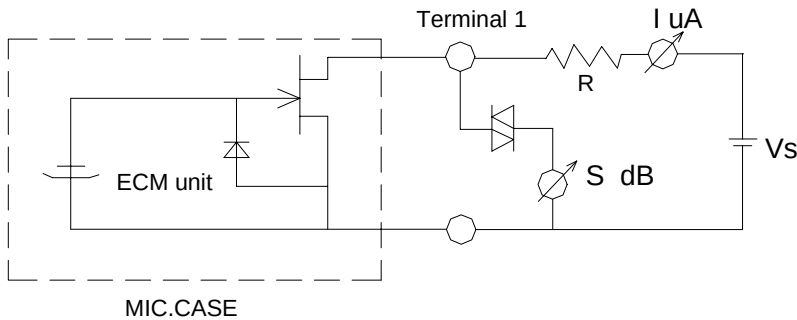
1.3 Mechanical Characteristics

Dimension	$\varnothing 9.7 \times 6.5(\text{mm})$ (See appearance.)		
Weight	Less than 1g		
Soldering Heat Shock	To be no interference in operation after soldering heat shock. temperature $260^{\circ}\text{C} \pm 5^{\circ}\text{C}$ for 5 ± 1 seconds.		
Terminal Mechanical Strength	To be no interference in operation after pulling the terminal with 1kg strength for 1 minutes		
Absolute Maximum Ratings	Operating Voltage	Vs (V)	10
	Storage Temperature Range	Tstg($^{\circ}\text{C}$)	-20~+70

2.Appearance



Specified Circuit:



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3.Reliability Test

Collision Test	After collided with the acceleration $100 \pm 10\text{m/s}$,at the vertical & horizontal directions for 1000 ± 10 times at the state of packing .Change of sensitivity within $\pm 3\text{dB}$ from initial.
Vibration Test	Vibration with 10Hz to 55Hz for 3 minutes each.full amplitude 2mm. for 30minutes at each of three axes. Change of sensitivity within $\pm 3\text{dB}$ from initial.
Drop Test	After droop from 0.8mm height to concrete floor. each one time for 5 surfaces at the state of packing. Change of sensitivity within $\pm 3\text{dB}$ from initial.
Humidity Test	After exposure at $60^{\circ}\text{C} \pm 2^{\circ}\text{C}$ and 90%-95% relative humidity or 200 hours. Change of sensitivity within $\pm 3\text{dB}$ from initial.(Measuring should be done after 2hours exposed to $20^{\circ}\text{C} \pm 2^{\circ}\text{C}$)
Temperature Test	1),After exposure at $70^{\circ}\text{C} \pm 2^{\circ}\text{C}$ for 200 hours.Change of sensitivity within $\pm 3\text{dB}$ from initial. (Measuring should be done after 2 hours exposed to $20^{\circ}\text{C} \pm 2^{\circ}\text{C}$.) 2),After exposure at $-25^{\circ}\text{C} \pm 2^{\circ}\text{C}$ for 200 hours. Change of sensitivity within $\pm 3\text{dB}$ from initial . (Measuring should be done after 2 hours exposed to $20^{\circ}\text{C} \pm 2^{\circ}\text{C}$.)
Teperature Cycle Test	After exposure at $-55^{\circ}\text{C} \pm 2^{\circ}\text{C}$ for 30 minutes, at $20^{\circ}\text{C} \pm 2^{\circ}\text{C}$ for 10 minutes. at $85^{\circ}\text{C} \pm 2^{\circ}\text{C}$ for 30 minutes. at $20^{\circ}\text{C} \pm 2^{\circ}\text{C}$ for 10 minutes, with 5 cycles. Change of sensitivity within $\pm 3\text{dB}$ from initial. (Measuring should be done after 2 hours exposed to $20^{\circ}\text{C} \pm 2^{\circ}\text{C}$.)

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